



UNITED STATES PATENT AND TRADEMARK OFFICE

cel

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,998	12/10/2001	Daisuke Terasawa	PA803C1	4535
23696	7590	05/05/2005	EXAMINER	
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			PEZZLO, JOHN	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/015,998

Applicant(s)

TERASAWA, DAISUKE

Examiner

John Pezzlo

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

I. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Schorman et al.(US 6,101,175) hereinafter Schorman.

Schorman discloses a method and apparatus for handoff within a communication system.

1. With respect to claim 1 - *A method of handoff control for a wireless remote unit having an established communications link with a first base station, comprising the steps of:*

transmitting a message to a network controller identifying a second base station having signal strength sufficient to establish communication;

Schorman discloses transmitting a message to a network controller identifying a second base station having signal strength sufficient to establish communication, refer to column 4 lines 32 to 35.

*receiving a message from said network controller via said first base station
identifying said second base station as a selected base station;*

Schorman discloses receiving a message from said network controller via said first base station identifying said second base station as a selected base station, refer to column 4 lines 35 to 45.

*monitoring an overhead channel from said second base station in order to
determine a frame synchronization of said second base station; and*

Schorman discloses monitoring an overhead channel from said second base station in order to determine a frame synchronization of said second base station, refer to column 8 lines 66 to 67 and column 9 lines 1 to 13.

transmitting said frame synchronization to said network controller.

Schorman discloses transmitting said frame synchronization to said network controller, refer to Figure 5 and column 8 lines 66 to 67 and column 9 lines 1 to 13.

2. With respect to claim 2 - *The method of Claim 1, further comprising the step of receiving a message from said network controller via said first base station identifying said second base station as an active base station.*

Schorman discloses receiving a message from said network controller via said first base station identifying said second base station as an active base station, refer to column 4 lines 35 to 45.

Art Unit: 2662

3. With respect to claim 3 - *The method of Claim 1, wherein said first base station and said second base station are asynchronous with respect to one another.*

Schorman discloses first base station and said second base station are asynchronous with respect to one another, refer to Figure 5 and column 5 lines 5 to 15.

4. With respect to claim 4 - *The method of Claim 1, further comprising the step of diversity combining signals transmitted by said first and said second base stations.*

Schorman discloses diversity combining signals transmitted by said first and said second base stations, refer to Figure 1 and column 5 lines 15 to 35.

5. With respect to claim 5 - *The method of Claim 1, further comprising the step of receiving a message from said network controller via said first base station comprising a neighbor list from which said second base station is selected.*

Schorman discloses receiving a message from said network controller via said first base station comprising a neighbor list from which said second base station is selected, refer to column 4 lines 35 to 45.

6. With respect to claim 6 - *The method of Claim 5 wherein said neighbor list comprises a series of entries, each entry corresponding to a base station with a high probability of having signal strength sufficient to establish communication, said entries comprising information identifying a reference base station and a PN offset wherein a timing of said reference base station is used as a reference timing for said PN offset.*

Schorman discloses identifying a reference base station and a PN offset wherein a timing of said reference base station is used as a reference timing for said PN offset, refer to column 3 lines 1 to 20.

7. With respect to claim 7 - *The method of Claim 6, wherein said entries further comprise a window size over which a search should be performed.*

Schorman discloses a window size over which a search should be performed, column 2 lines 32 to 52.

8. With respect to claim 8 - *The method of Claim 7, wherein said window size implicitly carries information concerning a relative class of synchronization between said reference base station and said base station to which said entries correspond.*

Schorman discloses window size implicitly carries information concerning a relative class of synchronization between said reference base station and said base station to which said entries correspond, refer to column 2 lines 53 to 65.

9. With respect to claim 9 - *The method of Claim 7, wherein said window size carries information concerning whether said base station corresponding to said entry is frame synchronized with said reference base station.*

Schorman discloses window size carries information concerning whether said base station corresponding to said entry is frame synchronized with said reference base station, refer to column 6 and column 7 and column 8 lines 1 to 30.

Art Unit: 2662

10. With respect to claim 10 - *A handoff control apparatus in a wireless remote unit, said remote unit having an established communication link with a first base station, said apparatus comprising:*

means for transmitting a message to a network controller identifying a second base station having signal strength sufficient to establish communication;

Schorman discloses transmitting a message to a network controller identifying a second base station having signal strength sufficient to establish communication, refer to column 4 lines 32 to 35.

means for receiving a message from said network controller via said first base station identifying said second base station as a selected base station;

Schorman discloses receiving a message from said network controller via said first base station identifying said second base station as a selected base station, refer to column 4 lines 35 to 45.

means for monitoring an overhead channel from said second base station in order to determine a frame synchronization of said second base station; and

Schorman discloses monitoring an overhead channel from said second base station in order to determine a frame synchronization of said second base station, refer to column 8 lines 66 to 67 and column 9 lines 1 to 13.

means for transmitting said frame synchronization to said network controller.

Schorman discloses transmitting said frame synchronization to said network controller, refer to Figure 5 and column 8 lines 66 to 67 and column 9 lines 1 to 13.

Art Unit: 2662

II. Claims 11-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Wheatley, III et al. (US 5,872,774) hereinafter Wheatley.

Wheatley discloses a mobile station assisted timing synchronization in a CDMA communication system.

Detail claim analysis:

1. With respect to claim 11 - *A method of handoff control for a wireless remote unit having an established communications link with a first base station, comprising the steps of:*

receiving a message from said remote unit identifying a second base station having signal strength sufficient to establish communication;

Wheatley discloses transmitting a message to a network controller identifying a second base station having signal strength sufficient to establish communication, refer to column 2 lines 30 to 42.

transmitting a message to said remote unit via said first base station identifying said second base station as a selected base station;

Wheatley discloses receiving a message from said network controller via said first base station identifying said second base station as a selected base station, refer to column 3 lines 30 to 46.

receiving a message identifying a frame synchronization of said second base station; and

Wheatley discloses transmitting said frame synchronization to said network controller, refer to column 4 lines 7 to 21 and column 11 lines 1 to 6.

establishing communication with said remote unit via said second base station such that transmissions from said first base station and transmissions from said second base station arrive at said remote unit approximately synchronized.

Wheatley discloses establishing communication with said remote unit via said second base station such that transmissions from said first base station and transmissions from said second base station arrive at said remote unit approximately synchronized, refer to column 4 lines 7 to 21 and column 11 lines 7 to 28 and column 12 lines 1 to 6.

2. With respect to claim 12 - *The method of Claim 11, further comprising the step of transmitting a message to said remote unit via said first base station identifying said second base station as an active base station.*

Wheatley discloses receiving a message from said network controller via said first base station identifying said second base station as an active base station, refer to column 3 lines 30 to 46.

3. With respect to claim 13 - *The method of Claim 11, wherein said first base station and said second base station are asynchronous with respect to one another.*

Wheatley discloses first base station and said second base station are asynchronous with respect to one another, refer to column 3 lines 46 to 59.

Art Unit: 2662

4. With respect to claim 14 - *The method of Claim 11, further comprising the step of diversity combining signals received from said remote unit via said first and said second base stations.*

Wheatley discloses diversity combining signals transmitted by said first and said second base stations, refer to column 1 lines 49 to 60.

5. With respect to claim 15 - *The method of Claim 11, wherein said step of transmitting a message identifying said second base station as a selected base station is executed only if resources are available at said second base station to support communication with said remote unit.*

Wheatley discloses transmitting a message identifying said second base station as a selected base station is executed only if resources are available at said second base station to support communication with said remote unit, refer to column 2 lines 43 to 55.

6. With respect to claim 16 - *A wireless remote unit having an established communications link with a first base station, comprising:*

means for receiving a message from said remote unit identifying a second base station having signal strength sufficient to establish communication;

Wheatley discloses transmitting a message to a network controller identifying a second base station having signal strength sufficient to establish communication, refer to column 2 lines 30 to 42.

Art Unit: 2662

means for transmitting a message to said remote unit via said first base station identifying said second base station as a selected base station;

Wheatley discloses receiving a message from said network controller via said first base station identifying said second base station as a selected base station, refer to column 3 lines 30 to 46.

means for receiving a message identifying a frame synchronization of said second base station; and

Wheatley discloses transmitting said frame synchronization to said network controller, refer to column 4 lines 7 to 21 and column 11 lines 1 to 6.

means for establishing communication with said remote unit via said second base station such that transmissions from said first base station and transmissions from said second base station arrive at said remote unit approximately synchronized.

Wheatley discloses establishing communication with said remote unit via said second base station such that transmissions from said first base station and transmissions from said second base station arrive at said remote unit approximately synchronized, refer to column 4 lines 7 to 21 and column 11 lines 7 to 28 and column 12 lines 1 to 6.

7. With respect to claim 17 - *In a communication system in which a remote unit communicates with other users via at least one base station, and in which each of at least two or more base stations among a plurality of base stations within said system transmits a unique pilot signal, a remote unit transceiver comprising:*

a pilot signal measurement circuit which measures strength of pilot signals received from a set of neighboring base stations;

Wheatley discloses a pilot signal measurement circuit which measures strength of pilot signals received from a set of neighboring base stations, refer to Figure 4 and column 6 lines 58 to 66 and column 9 lines 35 to 42.

a controller which generates a first signal strength message when a measured pilot signal of a target base station from among said set of neighboring base stations exceeds a first predetermined level;

Wheatley discloses a controller which generates a first signal strength message when a measured pilot signal of a target base station from among said set of neighboring base stations exceeds a first predetermined level, refer to Figures 4 and 5 and column 2 lines 30 to 42 and column 5 lines 5 to 14 and column 10 lines 25 to 67 and column 11 lines 1 to 6.

a remote unit transmitter which transmits said first signal strength message to at least one base station with which said remote unit is currently communicating, said first signal strength message identifying said target base station; and

Wheatley discloses a transmitter which transmits said first signal strength message to at least one base station with which said remote unit is currently communicating, said first signal strength message identifying said target base station, refer to Figures 4 and 5 and column 2 lines 30 to 42 and column 5 lines 5 to 14 and column 10 lines 25 to 67 and column 11 lines 1 to 6.

a demodulator which receives a first direction signal from said at least one base station and, in response to said first direction signal, monitors a forward link transmission from said target base station to determine a frame synchronization of said target base station.

Wheatley discloses a demodulator which receives a first direction signal from said at least one base station and, in response to said first direction signal, monitors a forward link transmission from said target base station to determine a frame synchronization of said target base station, refer to column 11 lines 1 to 6.

8. With respect to claim 18 - *The remote unit transceiver of Claim 17 wherein said controller generates a relative frame synchronization message to convey said frame synchronization and said remote unit transmitter transmits said relative frame synchronization to said at least one base station.*

Wheatley discloses transmitting said frame synchronization to said network controller, refer to Figures 4 and 5 and column 2 lines 30 to 42 and column 5 lines 5 to 14 and column 10 lines 25 to 67 and column 11 lines 1 to 6.

9. With respect to claim 19 - *In a spread spectrum communication system having a plurality of base stations and in which a remote unit communicates with another system user via at least one base station, a method for directing communications between said remote unit and said base stations comprising the steps of:*

providing to said remote unit an active list identifying one or more base stations through which active communication is established;

Wheatley discloses providing to said remote unit an active list identifying one or more base stations through which active communication is established, refer to column 2 lines 30 to 42 and column 3 lines 1 to 30.

receiving from said remote unit a candidate list identifying at least one target base station;

Wheatley discloses receiving from said remote unit a candidate list identifying at least one target base station, refer to column 2 lines 30 to 42.

determining an availability of system resources at said target base station;

Wheatley discloses determining an availability of system resources at said target base station, refer to column 2 lines 43 to 55.

providing to said remote unit a selected list identifying said target base station;

Wheatley discloses providing to said remote unit a selected list identifying said target base station, refer to column 9 lines 37 to 55.

receiving from said remote unit an alignment message identifying synchronization information concerning said target base station;

Wheatley discloses receiving from said remote unit an alignment message identifying synchronization information concerning said target base station, refer to column 6 lines 1 to 6.

directing said target base station to establish communication with said remote unit in accordance with said synchronization information; and

Wheatley discloses directing said target base station to establish communication with said remote unit in accordance with said synchronization information, refer to column 11 lines 5 to 28 and column 12 lines 1 to 6.

providing to said remote unit a second active list identifying said target base station.

Wheatley discloses providing to said remote unit a second active list identifying said target base station, refer to column 2 lines 30 to 42.

10. With respect to claim 20 - *The method of Claim 19, wherein said selected list comprises just one entry.*

Wheatley discloses selected list comprises just one entry, refer to column 3 lines 31 to 46.

11. With respect to claim 21 - *The method of directing communications of Claim 19, further comprising the steps of providing to said remote unit a neighbor list comprising a series of entries, said entries comprising information identifying a reference base station and a PN offset wherein a timing of said reference base station is used as a reference timing for said PN offset.*

Wheatley discloses identifying a reference base station and a PN offset wherein a timing of said reference base station is used as a reference timing for said PN offset, refer to Table 1 and column 3 lines 30 to 46.

Art Unit: 2662

12. With respect to claim 22 - *The method of directing communications of Claim 21, wherein said entries further comprise a window size over which a search should be performed.*

Wheatley discloses a window size over which a search should be performed, column 2 lines 56 to 67.

13. With respect to claim 23 - *The method of directing communications of Claim 22, wherein said window size implicitly carries information concerning a relative class of synchronization between said reference base station and said base station to which said entries correspond.*

Wheatley discloses window size implicitly carries information concerning a relative class of synchronization between said reference base station and said base station to which said entries correspond, refer to Table 1 and column 2 lines 56 to 67 and column 3 lines 1 to 60.

14. With respect to claim 24 - *The method of directing communications of Claim 22, wherein said window size carries information concerning whether said base station corresponding to said entry is frame synchronized with said reference base station.*

Wheatley discloses window size implicitly carries information concerning a relative class of synchronization between said reference base station and said base station to which said entries correspond, refer to Table 1 and column 2 lines 56 to 67 and column 3 lines 1 to 60.

Art Unit: 2662

15. With respect to claim 25 - *A network controller in spread spectrum communication system in which a remote unit communicates with another system user via at least one base station and wherein each base station transmits an identifying pilot signal, said network controller comprising:*

means for providing to said remote unit an active list identifying one or more base stations through which active communication is established;

Wheatley discloses providing to said remote unit an active list identifying one or more base stations through which active communication is established, refer to column 2 lines 30 to 42 and column 3 lines 1 to 30.

means for receiving from said remote unit a candidate list identifying at least one target base station;

Wheatley discloses receiving from said remote unit a candidate list identifying at least one target base station, refer to column 2 lines 30 to 42.

means for determining an availability of system resources at said target base station;

Wheatley discloses determining an availability of system resources at said target base station, refer to column 2 lines 43 to 55.

means for providing to said remote unit a selected list identifying said target base station;

Wheatley discloses providing to said remote unit a selected list identifying said target base station, refer to column 9 lines 37 to 55.

means for receiving from said remote unit an alignment message identifying synchronization information concerning said target base station;

Wheatley discloses receiving from said remote unit an alignment message identifying synchronization information concerning said target base station, refer to column 6 lines 1 to 6.

means for directing said target base station to establish communication with said remote unit in accordance with said synchronization information; and

Wheatley discloses directing said target base station to establish communication with said remote unit in accordance with said synchronization information, refer to column 11 lines 5 to 28 and column 12 lines 1 to 6.

means for providing to said remote unit a second active list identifying said target base station.

Wheatley discloses providing to said remote unit a second active list identifying said target base station, refer to column 2 lines 30 to 42.

16. With respect to claim 26 - *A method of time alignment in a wireless communications system in which a remote unit is capable of communication with one or more base stations simultaneously, said method comprising the steps of:*

receiving a first forward link transmission from a first base station having a first frame alignment;

Wheatley discloses receiving a first forward link transmission from a first base station having a first frame alignment, refer to column 2 lines 30 to 42 and column 3 lines 30 to 45.

receiving a second forward link transmission from a second base station having a second frame alignment wherein said second frame alignment comprises information concerning frame boundaries and excludes information concerning an absolute frame number;

Wheatley discloses receiving a second forward link transmission from a second base station having a second frame alignment wherein said second frame alignment comprises information concerning frame boundaries and excludes information concerning an absolute frame number, refer to Figure 4 and column 3 lines 1 to 46 and column 6 lines 58 to 67 and column 9 lines 29 to 55.

selecting a first arbitrary frame alignment;

Wheatley discloses selecting a first arbitrary frame alignment, refer to column 2 lines 30 to 42 and column 3 lines 30 to 45 and column 7 lines 5 to 14.

combining said first forward link transmission and said second forward link transmission according to said first arbitrary frame alignment creating a combined signal;

Wheatley discloses that the mobile station performs a search of the received signal which is a combined said first forward link transmission and said second forward link transmission according to said first arbitrary frame alignment creating a combined signal, refer to Figure 5 and column 1 lines 49 to 60 and column 10 lines 3 to 63.

determining whether a performance indication of said combined signal is within expected limits; and

Wheatley discloses determining whether a performance indication of said combined signal is within expected limits as part of the search process, refer to Figure 5 and column 10 lines 3 to 63.

combining said first forward link transmission and said second forward link transmission using a second arbitrary frame alignment if said performance indication is not within the expected limits.

Wheatley discloses combining said first forward link transmission and said second forward link transmission using a second arbitrary frame alignment if said performance indication is not within the expected limits which is to select a new PN offset spread code with which to perform the correlation, refer to Figure 5 and column 1 lines 49 to 60 and column 10 lines 3 to 63.

17. With respect to claim 27 - *A method of time alignment in a wireless communications system in which a remote unit is capable of communication with one or more base stations simultaneously, said method comprising the steps of:*

receiving a first forward link transmission from a first base station having a first frame alignment;

Wheatley discloses receiving a first forward link transmission from a first base station having a first frame alignment, refer to column 2 lines 30 to 42 and column 3 lines 30 to 45.

receiving a second forward link transmission from a second base station

Art Unit: 2662

having a second frame alignment wherein said second frame alignment comprises information concerning frame boundaries and excludes information concerning an absolute frame number;

Wheatley discloses receiving a second forward link transmission from a second base station having a second frame alignment wherein said second frame alignment comprises information concerning frame boundaries and excludes information concerning an absolute frame number, refer to Figure 4 and column 3 lines 1 to 46 and column 6 lines 58 to 67 and column 9 lines 29 to 55.

combining said first forward link transmission and said second forward link transmission according to a first frame alignment hypothesis to determine a first performance indication;

Wheatley discloses that the mobile station performs a search of the received signal which is a combined said first forward link transmission and said second forward link transmission according to said first arbitrary frame alignment creating a combined signal, refer to Figure 5 and column 1 lines 49 to 60 and column 10 lines 3 to 63.

combining said first forward link transmission and said second forward link transmission according to a second frame alignment hypothesis to determine a second performance indication; and

Wheatley discloses combining said first forward link transmission and said second forward link transmission according to a second frame alignment hypothesis to determine a second performance indication, refer to column 1 lines 49 to 60.

comparing said first and second performance indications in order to determine a most likely absolute frame alignment.

Wheatley discloses comparing said first and second performance indications in order to determine a most likely absolute frame alignment, refer to Figure 5 and column 1 lines 49 to 60 and column 10 lines 3 to 63.

18. With respect to claim 28 - *An apparatus for time alignment in a wireless communications remote unit capable of communication with one or more base stations simultaneously, said apparatus comprising:*

means for receiving a first forward link transmission from a first base station having a first frame alignment;

Wheatley discloses receiving a first forward link transmission from a first base station having a first frame alignment, refer to column 2 lines 30 to 42 and column 3 lines 30 to 45.

means for receiving a second forward link transmission from a second base station having a second frame alignment wherein said second frame alignment comprises information concerning frame boundaries and excludes information concerning an absolute frame number;

Wheatley discloses receiving a second forward link transmission from a second base station having a second frame alignment wherein said second frame alignment comprises information concerning frame boundaries and excludes information concerning an absolute frame number, refer to Figure 4 and column 3 lines 1 to 46 and column 6 lines 58 to 67 and column 9 lines 29 to 55.

means for selecting a first arbitrary frame alignment;

Wheatley discloses selecting a first arbitrary frame alignment, refer to column 2 lines 30 to 42 and column 3 lines 30 to 45 and column 7 lines 5 to 14.

means for combining said first forward link transmission and said second forward link transmission according to said first arbitrary frame alignment;

Wheatley discloses that the mobile station performs a search of the received signal which is a combined said first forward link transmission and said second forward link transmission according to said first arbitrary frame alignment creating a combined signal, refer to Figure 5 and column 1 lines 49 to 60 and column 10 lines 3 to 63.

means for determining whether a performance indication is within expected limits; and

Wheatley discloses determining whether a performance indication of said combined signal is within expected limits as part of the search process, refer to Figure 5 and column 10 lines 3 to 63.

means for combining said first forward link transmission and said second forward link transmission using a second arbitrary frame alignment if said performance indication is not within the expected limits.

Wheatley discloses combining said first forward link transmission and said second forward link transmission using a second arbitrary frame alignment if said performance indication is not within the expected limits which is to select a new PN offset spread code with which to perform the correlation, refer to Figure 5 and column 1 lines 49 to 60 and column 10 lines 3 to 63.

Art Unit: 2662

19. With respect to claim 29 - *An apparatus for -time alignment in a wireless communications system in which a remote unit is capable of communication with one or more base stations simultaneously, said apparatus comprising:*

means for receiving a first forward link transmission from a first base station having a first frame alignment;

Wheatley discloses receiving a first forward link transmission from a first base station having a first frame alignment, refer to column 2 lines 30 to 42 and column 3 lines 30 to 45.

means for receiving a second forward link transmission from a second base station having a second frame alignment wherein said second frame alignment comprises information concerning frame boundaries and excludes information concerning an absolute frame number;

Wheatley discloses receiving a second forward link transmission from a second base station having a second frame alignment wherein said second frame alignment comprises information concerning frame boundaries and excludes information concerning an absolute frame number, refer to Figure 4 and column 3 lines 1 to 46 and column 6 lines 58 to 67 and column 9 lines 29 to 55.

means for combining said first forward link transmission and said second forward link transmission according to a first frame alignment hypothesis to determine a first performance indication;

Wheatley discloses that the mobile station performs a search of the received signal which is a combined said first forward link transmission and said second forward

Art Unit: 2662

link transmission according to said first arbitrary frame alignment creating a combined signal, refer to Figure 5 and column 1 lines 49 to 60 and column 10 lines 3 to 63.

means for combining said first forward link transmission and said second forward link transmission according to a second frame alignment hypothesis to determine a second performance indication; and

Wheatley discloses combining said first forward link transmission and said second forward link transmission according to a second frame alignment hypothesis to determine a second performance indication, refer to column 1 lines 49 to 60.

means for comparing said first and second performance indications in order to determine a most likely absolute frame alignment.

Wheatley discloses comparing said first and second performance indications in order to determine a most likely absolute frame alignment, refer to Figure 5 and column 1 lines 49 to 60 and column 10 lines 3 to 63.

20. With respect to claim 30 - *In a spread spectrum communication system in which a remote unit communicates with another system user via at least one base station, a method for directing communications between said remote unit and said base stations comprising the steps of:*

providing to said remote unit a neighbor list identifying one or more base stations;

Wheatley discloses providing to said remote unit a neighbor list identifying one or more base stations, refer to column 9 lines 29 to 55.

providing to said remote unit an active list identifying one or more base stations through which active communication is established;

Art Unit: 2662

Wheatley discloses providing to said remote unit an active list identifying one or more base stations through which active communication is established, refer to column 2 lines 30 to 42.

receiving from said remote unit a candidate list identifying at least one target base station;

Wheatley discloses receiving from said remote unit a candidate list identifying at least one target base station, refer to column 2 lines 60 to 67.

determining an availability of system resources at said at least one target base station; and

Wheatley discloses determining an availability of system resources at said target base station, refer to column 2 lines 43 to 55.

providing to said remote unit an active list identifying said at least one target base station;

Wheatley discloses providing to said remote unit an active list identifying one or more base stations through which active communication is established, refer to column 2 lines 30 to 42.

wherein said neighbor list comprises a series of entries, said entries comprising information identifying a reference base station and a PN offset wherein a timing of said reference base station is used as a reference timing for said PN offset.

Wheatley discloses identifying a reference base station and a PN offset wherein a timing of said reference base station is used as a reference timing for said PN offset, refer to Table 1 and column 3 lines 30 to 46.

21. With respect to claim 31 - *The method of Claim 30, wherein said entries further comprise a window size over which a search should be performed.*

Wheatley discloses a window size over which a search should be performed, column 2 lines 56 to 67.

22. With respect to claim 32 - *The method of Claim 31, wherein said window size implicitly carries information concerning a relative class of synchronization between said reference base station and said base station to which said entries correspond.*

Wheatley discloses window size implicitly carries information concerning a relative class of synchronization between said reference base station and said base station to which said entries correspond, refer to Table 1 and column 2 lines 56 to 67 and column 3 lines 1 to 60.

23. With respect to claim 33 - *The method of Claim 31, wherein said window size carries information concerning whether said base station corresponding to said entry is frame synchronized with said reference base station.*

Wheatley discloses window size implicitly carries information concerning a relative class of synchronization between said reference base station and said base station to which said entries correspond, refer to Table 1 and column 2 lines 56 to 67 and column 3 lines 1 to 60.

Art Unit: 2662

24. With respect to claim 34 - *In a spread spectrum communication system in which a remote unit communicates with another system user via at least one base station, an apparatus for directing communications between said remote unit and said base stations comprising:*

means for providing to said remote unit a neighbor list identifying one or more base stations;

Wheatley discloses providing to said remote unit a neighbor list identifying one or more base stations, refer to column 9 lines 29 to 55.

means for providing to said remote unit an active list identifying one or more base stations through which active communication is established;

Wheatley discloses providing to said remote unit an active list identifying one or more base stations through which active communication is established, refer to column 2 lines 30 to 42.

means for receiving from said remote unit a candidate list identifying at least one target base station;

Wheatley discloses receiving from said remote unit a candidate list identifying at least one target base station, refer to column 2 lines 60 to 67.

means for determining an availability of system resources at said at least one target base station; and

Wheatley discloses determining an availability of system resources at said target base station, refer to column 2 lines 43 to 55.

means for providing to said remote unit an active list identifying said at least one target base station;

Art Unit: 2662

Wheatley discloses providing to said remote unit an active list identifying one or more base stations through which active communication is established, refer to column 2 lines 30 to 42.

wherein said neighbor list comprises a series of entries, said entries comprising information identifying a reference base station and a PN offset wherein a timing of said reference base station is used as a reference timing for said PN offset.

Wheatley discloses identifying a reference base station and a PN offset wherein a timing of said reference base station is used as a reference timing for said PN offset, refer to Table 1 and column 3 lines 30 to 46.

25. With respect to claim 35 - *In a spread spectrum communication system in which a remote unit communicates with another system user via at least one base station, a method for directing communications between said remote unit and said base stations comprising the steps of:*

receiving at said remote unit an active list identifying one or more base stations through which active communication is established;

Wheatley discloses means for receiving at said remote unit an active list identifying one or more base stations through which active communication is established, refer to column 2 lines 30 to 42.

receiving at said remote unit a neighbor list identifying one or more base stations;

Wheatley discloses means for receiving at said remote unit a neighbor list identifying one or more base stations with a high probability of having signal strength sufficient to establish communication, refer to column 9 lines 29 to 55.

measuring at said remote unit a signal strength of a pilot signal transmitted by each base station having an entry on said neighbor list;

Wheatley discloses means for measuring at said remote unit a signal strength of a pilot signal transmitted by each base station having an entry on said neighbor list, refer to Figures 4 and 5 and column 6 lines 58 to 67 and column 10 lines 18 to 63.

transmitting a first message from said remote unit, said first message identifying a candidate list comprising an entry corresponding to at least one target base station; and

Wheatley discloses a transmitter which transmits said first signal strength message to at least one base station with which said remote unit is currently communicating, said first signal strength message identifying said target base station, refer to Figures 4 and 5 and column 2 lines 30 to 42 and column 5 lines 5 to 14 and column 10 lines 25 to 67 and column 11 lines 1 to 6.

receiving at said remote a new active list of base station comprising an entry corresponding to said at least one target base station;

Wheatley discloses a demodulator which receives a first direction signal from said at least one base station and, in response to said first direction signal, monitors a forward link transmission from said target base station to determine a frame synchronization of said target base station, refer to column 11 lines 1 to 6.

wherein said neighbor list comprises a series of entries, said entries comprising information identifying a reference base station and a PN offset wherein a timing of said reference base station is used as a reference timing for said PN offset.

Wheatley discloses identifying a reference base station and a PN offset wherein a timing of said reference base station is used as a reference timing for said PN offset, refer to Table 1 and column 3 lines 30 to 46.

26. With respect to claim 36 - *The method of Claim 35, wherein said entries further comprise a window size over which a search should be performed.*

Wheatley discloses a window size over which a search should be performed, column 2 lines 56 to 67.

27. With respect to claim 37 - *The method of Claim 36, wherein said window size implicitly carries information concerning a relative class of synchronization between said reference base station and said base station to which said entries correspond.*

Wheatley discloses window size implicitly carries information concerning a relative class of synchronization between said reference base station and said base station to which said entries correspond, refer to Table 1 and column 2 lines 56 to 67 and column 3 lines 1 to 60.

Art Unit: 2662

28. With respect to claim 38 - *The method of Claim 36, wherein said window size carries information concerning whether said base station corresponding to said entry is frame synchronized with said reference base station.*

Wheatley discloses window size implicitly carries information concerning a relative class of synchronization between said reference base station and said base station to which said entries correspond, refer to Table 1 and column 2 lines 56 to 67 and column 3 lines 1 to 60.

29. With respect to claim 39 - *In a spread spectrum communication system in which a remote unit communicates with another system user via at least one base station, an apparatus for directing communications between said remote unit and said base stations comprising:*

means for receiving at said remote unit an active list identifying one or more base stations through which active communication is established;

Wheatley discloses means for receiving at said remote unit an active list identifying one or more base stations through which active communication is established, refer to column 2 lines 30 to 42.

means for receiving at said remote unit a neighbor list identifying one or more base stations with a high probability of having signal strength sufficient to establish communication;

Wheatley discloses means for receiving at said remote unit a neighbor list identifying one or more base stations with a high probability of having signal strength sufficient to establish communication, refer to column 9 lines 29 to 55.

Art Unit: 2662

means for measuring at said remote unit a signal strength of a pilot signal transmitted by each base station having an entry on said neighbor list;

Wheatley discloses means for measuring at said remote unit a signal strength of a pilot signal transmitted by each base station having an entry on said neighbor list, refer to Figures 4 and 5 and column 6 lines 58 to 67 and column 10 lines 18 to 63.

means for transmitting a first message from said remote unit, said first message identifying a candidate list comprising an entry corresponding to at least one target base station; and

Wheatley discloses a transmitter which transmits said first signal strength message to at least one base station with which said remote unit is currently communicating, said first signal strength message identifying said target base station, refer to Figures 4 and 5 and column 2 lines 30 to 42 and column 5 lines 5 to 14 and column 10 lines 25 to 67 and column 11 lines 1 to 6.

means for receiving at said remote a new active list of base station comprising an entry corresponding to said at least one target base station;

Wheatley discloses a demodulator which receives a first direction signal from said at least one base station and, in response to said first direction signal, monitors a forward link transmission from said target base station to determine a frame synchronization of said target base station, refer to column 11 lines 1 to 6.

wherein said neighbor list comprises a series of entries, said entries comprising information identifying a reference base station and a PN offset wherein a timing of said reference base station is used as a reference timing for said PN offset.

Wheatley discloses identifying a reference base station and a PN offset wherein a timing of said reference base station is used as a reference timing for said PN offset, refer to Table 1 and column 3 lines 30 to 46.

Response to Arguments

Applicant's arguments filed 25 August 2004 have been fully considered but they are not persuasive.

Applicant argues on page 15 of the response that Schorman does not disclose "transmitting a message to a network controller identifying a second base station having signal strength sufficient to establish communication". The examiner respectfully disagrees. Referring to Figures 1 and 4 and 5 and column 8 lines 30 to 65 and column 9 lines 33 to 41, Schorman discloses that the centralized processor (Network controller) receives messages from the remote units (mobiles) via the base stations of a second base station having signal strength sufficient to establish communication. Schorman discloses that the network controller (units 104 and 103 in Figure 1 and units 425, 404, and 403 in Figure 4) controls the cellular system and coordinates the formulation of the base station lists and the handoffs between base stations.

Applicant argues on page 17 of the response that Wheatley does not disclose "transmitting a message to said remote unit via said first base station identifying said second base station as a selected base station". The examiner respectfully disagrees. Wheatley discloses in column 3 lines 30 to 45 that a message is transmitted to the remote via the first base station, which is the PN offset of the second base station as the selected base station for the handoff.

Art Unit: 2662

Therefore, the first base station sends a message to the remote identifying the second base station selected as the new base station.

Applicant argues on page 20 of the response that Wheatley does not disclose "determining availability of system resources at a target base station". The examiner respectfully disagrees. Wheatley discloses in column 4 lines 7 to 37, that the slave base station (target base station) attains synchronization with the reference base station through messages transmitted from by the mobile station. Therefore, the target base station is determining availability of system resources by attempting to acquire and synchronize to the mobile station via the base station.

Applicant argues on page 23 of the response that Wheatley does not disclose "selecting a first arbitrary alignment and combining said first forward link transmission and said second forward link transmission using a second arbitrary frame alignment". The examiner respectfully disagrees. Wheatley discloses in column 2 lines 30 to 67 and column 3 lines 30 to 45, that the propagation delay between the base station and mobile station is not known. This unknown delay produces an unknown shift in the PN codes. The searching process attempts to determine the unknown shift in the PN codes. Therefore, the searching process starts with selecting a first arbitrary frame alignment. Wheatley discloses in Figure 5 and column 1 lines 49 to 60 and column 10 lines 3 to 63, that two signals are combined using diversity combining using said first arbitrary frame alignment for said first and said second forward link (diversity signals).

Applicant argues on page 25 of the response that Wheatley does not disclose "combining said first forward link transmission and said second forward link transmission according to a first frame alignment hypothesis to determine a first performance indication". The examiner

Art Unit: 2662

respectfully disagrees. Wheatley discloses in Figure 5 and column 1 lines 49 to 60 and column 10 lines 3 to 63, that two signals are combined using diversity combining using said first arbitrary frame alignment for said first and said second forward link (diversity signals). Wheatley discloses combining both signals to provide an estimate (first performance indication) which has a higher reliability than either path taken alone.

Applicant argues on page 28 of the response that Wheatley does not disclose "transmitting a first message from said remote unit, said first message identifying a candidate list comprising an entry corresponding to at least one target base station". The examiner respectfully disagrees. Wheatley discloses in Figures 4 and 5 and column 2 lines 30 to 42 and column 10 line 25 to column 11 line 6, that the remote station provides an Active Set (current set of base stations that the mobile is communicating with) to the base stations. Referring to Figure 4 callout 52 MSG GEN, the remote generates a message and transmits the message to the base stations of the Active Set.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

Art Unit: 2662

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Pezzlo whose telephone number is (571) 272-3090. The examiner can normally be reached on Monday to Friday from 8:30 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C.

or faxed to:

(703) 872-9306

For informal or draft communications, please label "PROPOSED" or "DRAFT"

Hand delivered responses should be brought to:

Jefferson Building

500 Dulany Street

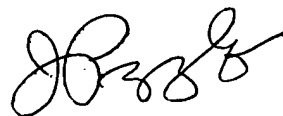
Alexandria, VA.

Application/Control Number: 10/015,998
Art Unit: 2662

Page 37

John Pezzlo

2 May 2005

A handwritten signature in black ink, appearing to read 'J. Pezzlo', with a stylized flourish at the end.

JOHN PEZZLO
PRIMARY EXAMINER